



WELLINGTON (Somerset)
URBAN SANITARY AUTHORITY



ANNUAL REPORT
FOR 1893,

BY

DR. J. MEREDITH,

Medical Officer of Health.

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With the Author's Compl.

ANNUAL REPORT

FOR 1893.



Sir,—I have the honour to submit my report of the sanitary condition of the district for the year 1893, and do so according to the arrangement adopted by the Medical Officer of Health for the Somerset County Council.

The area of the district is 5132 acres.

The population, census 1891, is 6808 ; estimated to the middle of 1893, is 6968.

Occupation of population — The main local industries are woollen factories and brickworks. The district is also a considerable agricultural centre.

The births during the year were 207, giving, in the estimated population, a rate of 29.70 per thousand.

The deaths during the year were 120, a rate of 17.22 per thousand on estimated population ; deducting the deaths of six non-resident persons the rate sinks to 15.

Reasoning from the experience obtained at the last two census taken, the “estimate” is most likely some scores above the actual population. It is considered that from 20 to 30 persons, usually those in the prime of life, leave the district yearly ; not enough, however, to affect materially the above figures.

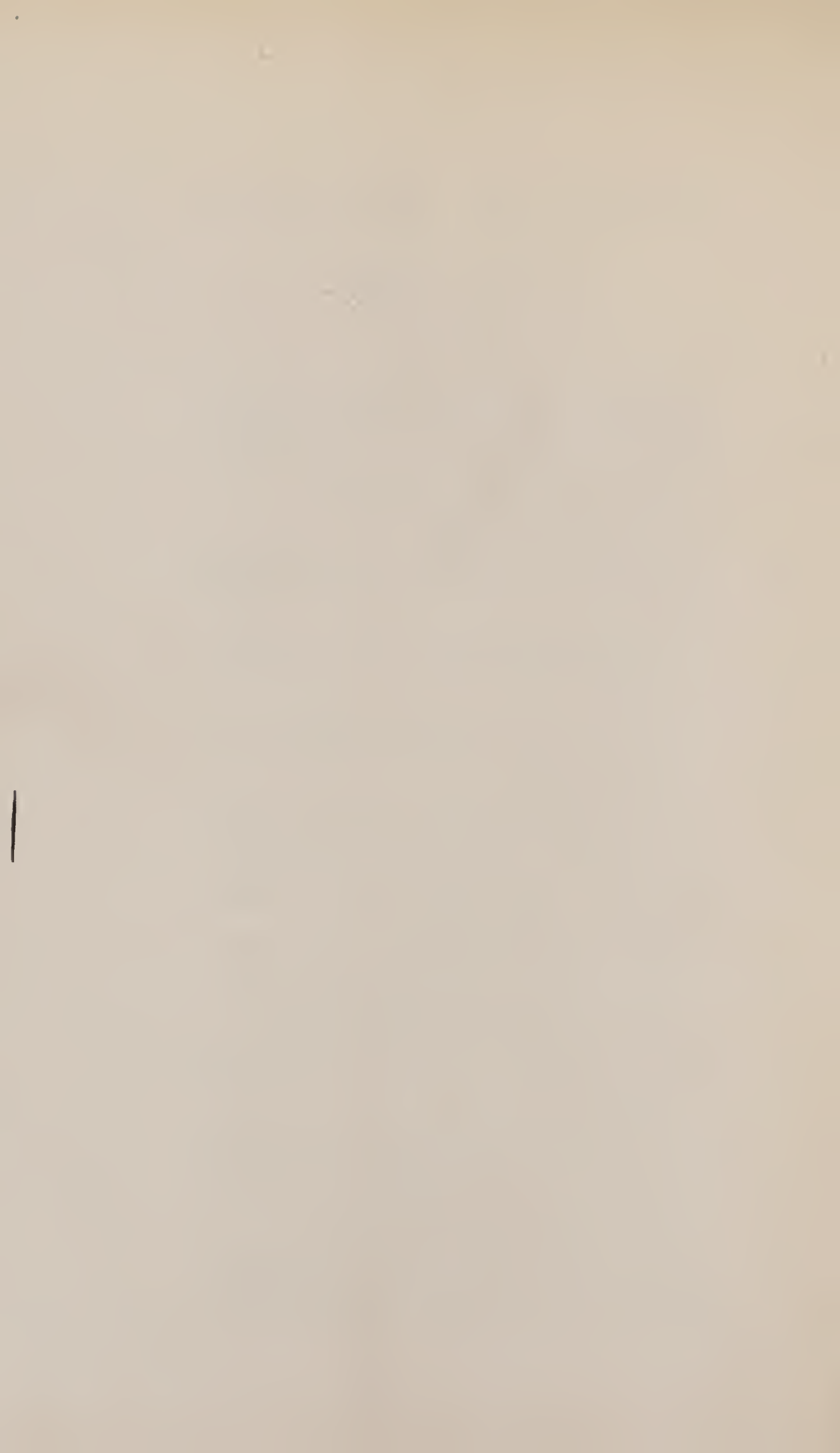
There were eight deaths from zymotic diseases, being a rate of 1.1 per thousand living.

Fourteen infants (under one year) died, showing a mortality of 67.6 per one thousand births.

The mortality return further shows that at the age of 1 and under 5 years, 9 died ; 5 and under 15, 14 ; 15 and under 25, 6 ; 25 and under 65, 31 ; 65 and upwards, 46.

As to the causes of death, 2 died of diphtheria who were under 5 years of age, and 3 who were 5 and upwards. One died of membranous croup, one of enteric fever, one of puerperal fever, one of diarrhoea, one of rheumatic fever, and ten of phthisis, who were all five and upwards.

Ten who were under five died of pulmonary disorders, and 18 who were five and upwards. Eleven, all five and upwards, died of heart diseases, one who was under 5 died of injury, and 3 who were above that age.



In the columns for all other diseases there were 10 registered as under five and 47 over that age.

Thus 23 children died under five years of age, and 97 who were five and upwards ; of these last 15 died at the Union Workhouse and 7 at the Cottage Hospital.

WATER.—The water supply of the town continues good. Some more old wells have been abandoned ; others deemed to contain fairly good water have been repaired and better protected than they used to be. Twenty-six more dwellings have taken in water from the town supply—and it has also been supplied for the use of stock in a couple of fields.

The Surveyor has placed before the Board a scheme for supplementing the present supply in case of a breakdown of machinery, or other emergency, and it is now under consideration.

SEWERAGE, &c.—The sewerage and drainage of the town are, to a very large extent, used for irrigation purposes, but after this a portion escapes into the river Tone—some is at times turned into a disused canal on the north side of the district—and the rest gets mixed with the water of the Blackbrook stream, and is generally taken advantage of for agricultural purposes.

The scavenging of the town is carried out by three men with a couple of horses, and regular sewerage carts, visiting every portion of the town systematically. The refuse is carried to a field on the north-east side of the district—where it is turned over, and sold to agriculturists, but not at a profit the Surveyor informs me.

INFLUENZA.—In my last three annual reports I have had to mention the prevalence in the district of Influenza, an illness with far-reaching consequences.


The year under review began with the existence of some mild cases of the disorder at different places, and instances of it cropped up in apparently sporadic form until the beginning of summer. During the later part of April, there was a sudden increase of cases ; but not so as to cause material inconvenience to business as on a former occasion.

No deaths were ascribed directly or indirectly to influenza during the last year.

NOTIFICATIONS.—Fifty-two notifications of infectious cases of sickness were registered.

I received notices of 31 cases of scarlet fever, and three of erysipelas. No deaths resulted from either of these ailments.

There were 12 cases of Diphtheria—five of them proved fatal. The death rate in this disease



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appears high ; but it should be observed that a number of diphtheria cases occur which are of such slight nature that they escape detection ; whilst at the same time they are the cause of the graver form in specially susceptible persons. Three of enteric fever—one death. Two of puerperal fever—one death. One instance of membranous croup, terminating fatally.

I made all the enquiries I could into the circumstances of the diphtheria cases. The explanations in regard to three of the fatal cases were not clear—as no adequate local explanation was forthcoming nor any clear history of contact. The fourth case occurred in a close ill-ventilated house where the drinking water was open to pollution. The fifth appeared to me to result from inhalation of sewer air from a badly arranged closet at the school—since put to rights.

In regard to the fatal case of enteric fever, it was found that a rain water pipe descending near the door of the cottage, as well as a drain at the back of it, were untrapped, and sewer gas escaped freely into the dwelling.

Illness of a suspicious character had taken place at an adjoining dwelling some time before ; but at that time the untrapped condition of the rain water pipe and drain were not suspected. At the time of my visits the occupants supplied no information—for fear of displeasing their landlord as I afterwards learnt—and the offensive air happened not to be escaping in appreciable quantity on the occasion of the inspection. Of the other two cases of this sickness, one developed in the same house as the above and under the like circumstances—while the third occurred in the country, being the outcome of gross insanitary conditions reported upon on the 23rd October.

The puerperal fever cases were not connected with one another in any way ; and the case of membranous croup appears to be an isolated one also.

There is no infectious Hospital in the district, nor as yet a public disinfecting chamber.

No special action has been taken in regard to dairies, cowsheds, and milkshops, except in one case where some milk was sent to me containing blood. The explanation given of this, was, that the cow yielding it, had hurt herself in jumping over a piece of wood—and the owner expressed his regret that his milkman should have sent off the milk under such circumstances.

The common lodging house has been often visited and the lodgers inspected as closely as possible.

We have had 2295 tramps visiting the tramp ward ; but as yet they have not imported disease

into the place although two cases of small pox were developed—one at Taunton, and the other at Tiverton—by a couple of them, after they had passed through this district, as was ascertained by communications from these places.

The public have themselves to blame for the existence, to say nothing of the encouragement given to this mass of, mostly, useless eaters of bread.

INSPECTIONS.—The usual systematic inspections have been carried out by the sanitary inspector and myself, and many forms of nuisances have been reported upon and abatement brought about.

The chief nuisance we have had to deal with during the year, was that arising from pig keeping. At one time during the early part of the summer, a great number of people, mostly cottagers, began keeping pigs. They did not content themselves with keeping one or two, but as the sanitary inspector reported, kept many, in some instances as many as twenty—quite regardless of the Bye-laws even in respect of distances. At Martin's Buildings, it was discovered in the early part of July that there were 40 pigs in styes situated in close proximity to the cottagers wash houses, where the women spent a considerable portion of their time each day. Pigs were kept in Burgage, Springfield, and other places in the town, and in some cases in a very dirty state, and in defiance of local regulations.

The offending persons were compelled to reduce the number of their pigs, while some had to get rid of them altogether.

The annoyance of pig keeping in the town was considerable in many places, but it was very slight compared to what was experienced at Rockwell Green, where a great many were kept. The nuisance arising from these animals and their discharge, vitiated the air of the neighbourhood.

The sanitary inspector reported that at three of the largest piggeries in the village as many as 212 animals were confined in pens, either wholly or partially.

Pig keeping being profitable, at Rockwell Green cottagers ventured to pen their pigs so near their own dwellings that the animals must have been a nuisance to them, besides being, from their position, an infringement of the Bye-laws. The nuisance was soon abated. At a few places, as reported in September, I found that while the styes were fairly clean, the manure was gathered in heaps near them, and caused a sickening nuisance in the locality. In order to suppress this, at one time a growing nuisance, the Local Board was constrained to issue peremptory

orders, and were preparing to follow them up with legal proceedings in the event of non-compliance, but no necessity arose for this.

Several drains were reported as being out of repair, and the cause of nuisance through sewer gas. Several houses at Rockwell Green experienced annoyances in this way, and some houses in High Street suffered seriously in the same manner—one through the action of rats. Defective masonry around gratings is a frequent cause of a nuisance of this description.

A large number of new drains have been constructed during the year, and the defective constructions of long ago are being replaced by glazed socket pipes.

Offensive smells emanating from butchers' premises had to be reported to the Board, with the result of bringing about an abatement.

In the neighbourhood of the Railway Station great annoyance was experienced during the month of May, from smells arising from the mill stream. Accumulations formed on the surface of the water and were hindered in their onward course by the narrowness of the railway bridge, and became stagnant and noxious. Means were taken to remedy this state of thing, and no further complaints have been made. This stream receives the discharges from the Westford cottages and also from some of the Rockwell Green ones.

A couple of houses at Farthings' Pitts were reported as being unfit for habitation, and they were repaired.

I append copies of the usual returns, but nothing arises from them calling for special remark.

The Medical Officer of the Somerset County Council has a heading in his summary of reports for the geology of a district.

I have hitherto made no reference to this subject in my reports; but it occurred to me, as the heading is persisted in, to ask Mr W A E Ussher, of the Geological Survey, a competent scientist, to favour me with a statement of the geology of the neighbourhood, and as he has kindly complied I have the pleasure to submit his observations in the form of an addendum.

One of the most interesting features of the statement, is its bearing upon our water supply.

The Westford spring from which the town is supplied issues from Keuper sandstone and near a fault in that formation. The water is retained in the sandstone as if in a sponge; but there is no means of knowing where the area is through which the rain enters the formation.

The contemplated supplementary supply will be obtained from greensand talus overlying marl

on the Blackdown range. south of the district. This talus, or broken and disturbed area of the local formation, diverts some of the water in the range to the north side, otherwise it would follow the natural drainage along the inclination of the strata, and escape to the south; as by far the greatest quantity does.

The spring at Rockwell Green, which has been of such incalculable value to the village, originates in much the same formation as the Westford one, and makes its exit near the junction of the sandstone with marl.

The Chitterwell and Holywell Lake springs—the only other important ones in the district—are given out by clayey seams or concretionary beds in sandstone near junction with conglomerate.

During last summer the Chitterwell spring ceased flowing; while those on the lower level about Holywell Lake did not. From their position it may be inferred that their catchment ground is the same. The reason why the Holywell Lake springs continued was, probably, because the surface rain over the loamy and sandy ground below the level of Chitterwell and above that of Holywell Lake, contributed to feed this last after the storage of the higher level had run low or ceased.—Signed, J. MEREDITH, Medical Officer of Health.

THE GEOLOGY OF WELLINGTON, SOMERSET.

By W. A. E. Ussher, F.G.S.

The town of Wellington is built upon the Triassic rocks or new red sandstone formation. This formation is divisible into five subdivisions in the neighbourhood, viz:—1, marl; 2, sandstone or sand rock; 3, conglomerate; 4, marl; 5, sand and sandstone. The town itself is situated chiefly upon No. 2. The marls, which form the uppermost member of the group, are well shown in the Poole Brick pits, where their lower beds are exposed. They make a very irregular boundary with the sandstone No. 2, which crosses the road about 16 chains, or 350 yards, north of Wellington Church, and again in the centre of the town, where a narrow strip of marl crosses the Market Place, extending thence for about a quarter of a mile in a north westerly direction. The sandstones No. 2 are well shown in the road to Rockwell Green. Rockwell Green is on the marls No. 1, the boundary between marl and sandstone being a fault running in a W.N.W. and E.S.E. direction. The sandstones make a dry permeable soil. These two sub-divisions belong to the Keuper or upper division of the new red sandstone formation.

The Keuper marl extends eastward through the vale of Taunton to Bristol, and southward passing under the Greensand of the Blackdowns to Sidmouth and Seaton. It extends from Wellington northward, through East Ninehead to Williton and Minehead.

The Keuper sandstones, which pass under the marls last mentioned, dipping on the whole in an Easterly direction, are much more restricted in their range. Their main outcrop extends northward from Wellington through Ninehead, where they are well exposed, to the vicinity of Williton and Withycombe. Southward, they run from Wellington by Whiteball, Burlescombe, Uffculme, Sidmouth Junction, to Sidmouth and Budleigh Salterton. In the Bridgwater district, on the south margin of the Quantocks, and near Bristol, the sandstones are here and there visible.

There are numerous dislocations or faults in the Wellington district. These are not often actually visible in section, but their effects on the distribution of the Triassic sub-divisions are often manifest. Thus at Westford marls and sandstones (1 and 2) are faulted against conglomerate and marl (3 and 4). The conglomerate (3) forms the escarpment of Langford Budville and of Thorn St. Margaret. Towards Whiteball it denegates into a pebbly sand rock, which forms a broken range of low hills, terminating on the south at Westdown Hill, Budleigh Salterton, where the pebble beds have long ago attracted the attention of geologists. Northward, the conglomerate extends by Combe Florey into the Williton district. Throughout its extension, unless bounded by fault the conglomerate or pebble bed sub-division passes eastward under the Keuper sandstones (2) and overlies marls (4), which occupy the slopes on the west. The marls (4) are sometimes dug for brick-making. They rest upon sandstones, which have locally a bed of small conglomerate in their upper part. These sands or sandstones (5) rest upon the older rocks, the boundary running from Stogumber southward by Bathealton to Greenham. In the Burlescombe district the limestones of West Leigh, Canons Leigh, Whipcott, &c, often form patches or inliers in the lower beds of the Trias.

The Westleigh limestones are Lower Carboniferous, but from Kittisford northward the older rocks are Devonian, the foundation which forms the highlands of Exmoor, the Brendons, and the Quantocks. Between the oldest Triassic rocks and the Culm Measures (the carboniferous type to which the Westleigh limestones belong) there is a great discordance. In other words the Culm

Measures had been folded, upheaved, and in fact had undergone almost as much disturbance as we see now in the West Leigh Quarries before the Triassic rocks were deposited upon their upturned and denuded edges. Again between the Triassic rocks and the Cretaceous rocks (Upper Greensand) of the Blackdowns there is a considerable gap of unrepresented time.

The Triassic rocks, as well as the overlying Liassic and Oolitic strata, had been upheaved and denuded, and the Upper Greensand had been deposited across their several outcrops. This is a case of unconformable overlap. The sands of the Blackdowns are capped by an accumulation of clay or loam, with broken fragments of flint and chert.

The most recent deposits of the Wellington district consist of river mud, or Alluvium and gravel, which form the flat tracts through which the Tone and its tributaries flow, or lines of drainage by which the cretaceous material of the Blackdowns has been carried to lower levels and gravel patches which form relics of more widespread deposits, and mark earlier stages in the processes of denudation by rain and river action. Alluvial flats of considerable extent are found near West Buckland, Bradford, and Angersleigh.

Gravel patches occur over a considerable part of the Triassic rocks between Wellington and Sampford Arundell.

The following is a list of the geological formations and deposits in the Wellington district, arranged in chronological order, beginning with the most recent :—

Post Tertiary—

Alluvium and river gravel.

Old river gravels.

Clay or loam with flint and chert.

Secondary — *Cretaceous.*

Upper Greensand.

Triassic.

- | | | |
|--------|---|--------------------------------|
| Keuper | { | 1 Red variegated marl. |
| | | 2 Sand rock or sandstone. |
| | | 3 Conglomerate or pebble beds. |
| | | 4 Red marls. |
| | | 5 Red sand rock. |

Palæozoic—

Lower Culm Measures--Posidonomya limestone.

Dark shales.

Devonian rocks—Pilton beds (Upper Devonian.)

